REMARKS

I. Status of the Claims:

Claims 12, 17-19 and 22-27 are currently pending. By this Amendment, claims 12, 22 and 26-27 have been amended. Accordingly, upon entry of this Amendment, claims 12, 17-19 and 22-27 would be pending. No new matter has been introduced by this Amendment. Entry of this Amendment is respectfully requested.

II. Rejections under 35 U.S.C. §§ 102 and 103:

Claim 22 is rejected under 35 U.S.C. § 102(e) as being anticipated by Hashimoto (US 6,956,605). Claim 22 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cox el. (US 5,381,013) in view of Hirama (US 5,998,815). Claims 12, 24 and 25 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Seachman (US 4,281,254) in view of Hashimoto (US 6,956,605, hereinafter Hashimoto '605). Claim 12 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Seachman in view of Cox et al. Claim 17 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Seachman (US 4,281,254) in view of Hashimoto '605 as applied to claim 12, and further in view of Sayag (US 5,585,847). Claims 18 and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Seachman in view of Hashimoto '605 and further in view of Sayag as applied to claim 17, and further in view of Saito et al. (US 6,256,063). Claim 23 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Seachman in view of Cox et al. as applied to claim 12, and further in view of Hashimoto (US 4,910,599, hereinafter Hashimoto '599). Claim 26 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Seachman in view of Cox et al. as applied to claim 12, and further in view of

Nagano (US 5,126,860). Claim 27 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Cox et al. in view of Nagano.

A. Claim 22:

Claim 22, as amended, is directed to a processing method for an image processing apparatus including a first element array having a plurality of photoelectric conversion elements arranged in a line, a second element array shifted from the first element array by a predetermined distance in a main scanning direction and having a plurality of photoelectric conversion elements arranged in a line, a first CCD shift register, and a second CCD shift register. The method involves: transferring image signals from said first element array to said first CCD shift register and from said second element array to said second CCD shift register, in parallel; serially transferring the image signals in said first and second CCD shift registers, in a low resolution mode, in accordance with three types of transfer pulses having different phases so as to add up two signals outputted from two adjacent elements during serially transferring the signals; and serially transferring the image signals in said first and second CCD shift registers, in a high-resolution mode, in accordance with only two types of transfer pulses having different phases so as to output signals from said first and second pixel arrays without addition.

Turning to the cited references, Hashimoto (US 6,956,605) is related to a CMOS sensor and a shift register in Hashimoto does <u>not</u> transfer signals which are input from photoelectric conversion elements.

Cox et al. (US 5,381,013) disclose in line 21 of column 2 that a shift register transfers a signal which has added up in a gain stage. The gain stage is a dedicated circuit for adding and amplifying signals from a element connected to the gain stage and is totally different from a shift register. Cox et al. cannot "add up two signals outputted from two adjacent element

during serially transferring the signals," as recited in Claim 22. Therefore, even assuming that

Cox et al. and Hirama (US Patent 5,998,815) are combined, the signals are not added up but

merely transferred as is.

Accordingly, the Applicant respectfully submits that claim 22 and its dependent

claims are not anticipated or rendered obvious by the cited references, individually or in

combination.

B.   Claim 12:

Claim 12, as amended, is directed to an image processing apparatus having a first

element array having a plurality of photoelectric conversion elements arranged in a line; a second

element array shifted from said first element array by a predetermined distance in a main

scanning direction and having a plurality of photoelectric conversion elements arranged in a line;

a first CCD shift register for serially transferring signals from said first element array in response

to transfer pulses; a second CCD shift register for serially transferring signals from said second

element array in response to the transfer pulses; and a pulse supply unit for supplying three types

of the transfer pulses having different phases to said first CCD shift register and supplying three

types of the transfer pulses having different pulses to said second CCD shift register.

As further claimed, the pulse supply unit supplies, in a low-resolution mode, said

three types of the transfer pulses having different phases to said first and second CCD shift

registers in order to add, shift and output signals which have been output from adjacent elements

of said first and second element array, and, in a high-resolution mode, only two types of the

transfer pulses having different phases to said first and second CCD shift registers so as to shift

and output signals, which have been output from said first and second pixel arrays, without

addition.

As noted above, Hashimoto (US 6,956,605) is related to a CMOS sensor and a shift register in Hashimoto does <u>not</u> transfer signals which are input from photoelectric conversion elements.

Cox et al. (US 5,381,013) disclose in line 21 of column 2 that a shift register transfers a signal which has added up in a gain stage. The gain stage is a dedicated circuit for adding and amplifying signals from a element connected to the gain stage and is totally different from a shift register.

Moreover, Seachman describes "while a two phase arrangement has been described, additional phases i.e., three phase, four phase etc. may be contemplated. In that circumstance, the number of shift register phase gates required would be, in the case of a three phase system, one third of that required heretofore, with a conventional photosensitive array or in the case of a four phase system, one fourth of that required heretofore." However, Seachman is silent as to any description that, in a low-resolution mode, three types of the transfer pulses having different phases are transferred to said first and second shift registers, and, in a high-resolution mode, only two types of the transfer pulses having different phases to said first and second shift registers so as to shift and output signals, as reflected in Claim 12.

With respect to claims 26 and 27, on the other hand, four phase signals labeled as ϕR, $\phi 2$, $\phi 1$, ϕT are disclosed in Nagano(US Patent 5,126,860). However, only $\phi 2$ and $\phi 1$ are supplied to a CCD shift register. Therefore, there are no description of "a pulse supply unit for supplying three types of the transfer pulses having different phases to said first shift register and supplying three types of the transfer pulses having different pulses to said second shift register," as cited in Claim 12. As such, it is respectfully submitted that one of ordinary skill in the art

would not combine the references in the manner suggested by the Examiner to disclose or

suggest the subject matter of claims 26 or 27.

It is also respectfully submitted that the Examiner is improperly applying the

concept of "intended use" to claim language in the apparatus or device claims of the present

application. See MPEP §2114. As a consequence, the Examiner has improperly disregarded

limitations recited in the claims, and thus has not properly established a prima facie case for

rejecting these claims. Specifically, in the apparatus or device claims (e.g., claim 12), the

functional language at issue is believed to impart a structural aspect to the sub-component or

structural relationship between the different components and are thus material to the structure of

the claimed sub-components and apparatus. This is simply different than the case law set forth

in section 2114 of the MPEP as follows:

> *Ex parte Masham,* 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)
> (The preamble of claim 1 recited that the apparatus was "for
> mixing flowing developer material" and the body of the claim
> recited "means for mixing ..., said mixing means being stationary
> and completely submerged in the developer material". The claim
> was rejected over a reference which taught all the structural
> limitations of the claim for the intended use of mixing flowing
> developer. However, the mixer was only partially submerged in
> the developer material. The Board held that the amount of
> submersion is immaterial to the structure of the mixer and thus the
> claim was properly rejected.).

As described above, the claim language at issue in Masham simply related to the amount of

submersion of a mixer in the developer material, which was considered to be immaterial to the

structure. The facts of Masham are however different, i.e., not sufficiently similar, to those at

issue in the current application. Accordingly, the Applicant respectfully requests clarification as

to why the claim language noted as "intended use" is immaterial to the structure of the claimed

apparatus. In this regard, the Applicant also respectfully requests that the Examiner identify

exactly what claim language is considered to be immaterial to the structure as this is not clear from the Office Action. If the Examiner intends to rely on case law, then an explanation on how such a case(s) is factually similar to the present situation is respectfully requested. <u>See</u> MPEP 2144 (LEGAL PRECEDENT CAN PROVIDE THE RATIONALE SUPPORTING OBVIOUSNESS ONLY IF THE FACTS IN THE CASE ARE SUFFICIENTLY SIMILAR TO THOSE IN THE APPLICATION).

In view of the foregoing, the Applicant respectfully submits that claim 12 and its dependent claims are not rendered obvious by the cited references, individually or in combination.

<div align="center"><u>CONCLUSION</u></div>

Based on the foregoing amendments and remarks, the Applicant respectfully requests reconsideration and withdrawal of the rejection of claims and allowance of this application.

88736 v1